

REMARKS

Claims 1-6 and 15-20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over US patent publication 2002/0174306 by Gajjar et al. (Gajjar1) in view of US patent 7,415,506 to Gajjar et al. (Gajjar2). Claims 7-14, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gajjar1 in view of Gajjar2 and in further view of US patent publication 2004/0123063 by Dalal (Dalal).

Applicants thank the Examiner for the telephone interview of December 9, 2008. We discussed the present invention and a proposed amendment. The Examiner suggested several changes to the amendment, to which Applicants agreed. Applicants also thank the Examiner for his subsequent comments on and corrections to the amendment.

Amendments to the Claims

Applicants have amended claim 1 with the limitation "...a specification module configured to specify a Logical Unit Number (LUN) storage resource of a plurality of existing storage resources corresponding to a client as a model storage resource in a modeling policy..."

The amendment is fully supported by the specification. See page 13, ¶ 47.

Claim 1 is also amended with the limitation "...monitor ~~the~~ a plurality of existing storage resources ~~corresponding to a client~~ and identify a model storage server and a model storage pool of the model storage resource in the modeling policy, wherein the model storage server manages a plurality of storage pools, wherein one of the plurality of existing storage resources designated is the model storage resource...." The amendment is fully supported by the specification. See

page 14, ¶ 51.

Applicants have also amended claim 1 with the limitation “...store a plurality of storage provisioning policies, the plurality of storage provisioning policies ~~defining~~ comprising the modeling policy...” The amendment is well supported by the specification. See page 13, ¶ 45.

In addition, claim 1 is amended with the limitation “...receive a storage alert for the client and provision a new LUN storage resource for the client in the model storage pool if the new LUN storage resource can be provisioned in the model storage pool else if the new LUN storage resource cannot be provisioned in the model storage pool, provision the new LUN storage resource for the client in the any storage pool managed by the model storage server according to the modeling policy, wherein the new LUN storage resource is modeled after the model storage resource...” The amendment is well supported by the specification. See page 17, ¶ 57.

Claims 11 and 15 are similarly amended. Claims 8, 12, 14, and 22 are amended to conform to amended predecessor claims. Claims 3-5 and 17-19 are canceled.

Applicants have added new claims 23, 25, and 27. The new claims are fully supported by the specification. See page 13, ¶ 47; page 15, ¶ 53-54. Applicants have also added new claims 24, 26, and 28. The new claims are fully supported by the specification. See page 13, ¶ 47; page 16, Table 1.

Response to rejections of claims under 35 U.S.C. § 103(a)

Claims 1-6 and 15-20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gajjar1 in view of Gajjar2. Claims 7-14, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as

unpatentable over Gajjar1 in view of Gajjar2 and in further view of Dalal.

Independent claim 1 as amended includes the limitations:

“...a specification module configured to **specify a Logical Unit Number (LUN) storage resource** of a plurality of existing storage resources corresponding to a client **as a model storage resource in a modeling policy**;

a monitoring module configured to monitor the plurality of existing storage resources **and identify a model storage server and a model storage pool of the model storage resource in the modeling policy**, wherein the model storage server manages a plurality of storage pools;

a policy module configured to store a plurality of storage provisioning policies, the plurality of storage provisioning policies comprising the modeling policy; and

a provisioning module configured to receive a storage alert for the client and **provision a new LUN storage resource for the client in the model storage pool if the new LUN storage resource can be provisioned in the model storage pool else if the new LUN storage resource cannot be provisioned in the model storage pool, provision the new LUN storage resource for the client in the any storage pool managed by the model storage server , wherein the new LUN storage resource is modeled after the model storage resource.**” Emphasis added.

Independent claims 11 and 15 include similar limitations. Thus the present invention claims specifying a LUN storage resource as a model storage resource and identifying a model

storage server and a model storage pool of the model storage resource. The present invention further claims provisioning a new LUN storage resource for a client in the model storage pool if the new LUN storage resource can be provisioned in the model storage pool. If the new LUN storage resource cannot be provisioned in the model storage pool, the present invention provisions the new LUN storage resource for the client in the any storage pool managed by the model storage server. The new LUN storage resource is modeled after the model storage resource.

The present invention is distinguished from Gajjar1, Gajjar2, and Dalal in specifying a model storage resource and modeling a new LUN storage resource after the model storage resource. In contrast, Gajjar1 discloses creating storage heuristics that define rules and constraints in a provisioning policy. Gajjar1, page 1, ¶ 7. Storage devices are selected that satisfy the storage heuristics. Gajjar1, page 1, ¶ 8. Gajjar2 teaches identifying service requirements for a media unit (storage resource). Gajjar2, col. 6, lines 33-38. Gajjar2 then teaches selecting a best fit media unit from media units that meet the service requirements. Gajjar2, col. 6, lines 38-42.

Thus in Gajjar1 and Gajjar2 new storage resources (storage devices/media units) are modeled on storage heuristics/service requirements, whereas the present invention claims modeling the new LUN storage resource on the model storage resource. The present invention models the new LUN storage resource on an existing model storage resource while Gajjar2 models the new media unit on abstract storage heuristics/service requirements. Applicants therefore submit that Gajjar1, Gajjar2, and Dalal do not teach specifying a model storage

resource and modeling a new LUN storage resource after the model storage resource.

The present invention is further distinguished in claiming identifying a model storage server and a model storage pool of the model storage resource. This limitation is not disclosed by Gajjar1, Gajjar2, and Dalal. The present invention also claims provisioning the new LUN storage resource for a client in the model storage pool if the new LUN storage resource can be provisioned in the model storage pool. The present invention further claims that if the new LUN storage resource cannot be provisioned in the model storage pool, the new LUN storage resource is provisioned in the any storage pool managed by the model storage server. These limitations are also not disclosed by Gajjar1, Gajjar2, and Dalal. Gajjar1 does disclose that storage can be in a single server, but not the hierarchy of selecting storage pools, first to the model storage pool and then to a storage pool of the model storage server, as claimed by the present invention.

Gajjar1, page 5, ¶ 55-56.

Applicants therefore submit that Gajjar1, Gajjar2, and Dalal do not teach identifying a model storage server and a model storage pool of the model storage resource and provisioning a new LUN storage resource for a client in the model storage pool if the new LUN storage resource can be provisioned in the model storage pool, else if the new LUN storage resource cannot be provisioned in the model storage pool, provisioning the new LUN storage resource for the client in the any storage pool managed by the model storage server.

Because Gajjar1, Gajjar2, and Dalal do not disclose each element of independent claims 1, 11, and 15, Applicants submit that claims 1, 11, and 15 are allowable. Applicants further submit that claims 2, 6-10, 12-14, 16, and 20-28 are allowable as depending from allowable

claims. Claims 3-5 and 17-19 are canceled.

Conclusion

As a result of the presented remarks, Applicants assert that the application is in condition for prompt allowance. Should additional information be required regarding the traversal of the rejections of the claims enumerated above, Examiner is respectfully asked to notify Applicants of such need. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contact the undersigned.

Respectfully submitted,

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